

Map and Atlas Cases

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IN THE LAST TWENTY-FIVE YEARS there has been an enormous increase in the production of maps, partly because of wars and the continuing requirements of national defense, but also because of a rapidly growing use of maps in many other fields—economic and social planning, engineering construction, earth sciences, etc. The resulting flood of cartographic materials has created a new storage problem for libraries, of which few if any had space or equipment for the purpose.

As Ristow¹ reported ten years ago, many libraries were forced by depository programs of government agencies to do something about their map collections, and some were able to purchase special equipment to house them. For those librarians whose map collections are already large and are preserved in cabinets obtained at considerable expense, this discussion may be of little interest. They may be committed to a particular type and size of map case, since there are obvious advantages in uniformity. The custodian of the small or inadequately housed collection and the librarian who may be debating the question of accepting maps as part of his stock in trade may be saved some effort and expense by the following brief report on available equipment and the opinions of some authorities concerning the various types.

Skelton says that "The tactical objective of a sound method of storage is the preservation of the face of the map and the elimination of factors tending to cause strain, fracture or decay in its material."² Compared with books, maps are relatively defenseless against damage. Their great variation in size and their flexibility and low tear strength in relation to surface area make special handling and equipment necessary for their preservation.

Lamination with acetate and cloth backing can all but eliminate the possibility of tearing and protect the face from moisture, acids, and abrasion, but there remains the problem of protection from dust and

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from creasing or curling. When we add to this the requirements of accessibility in a working collection, of providing for ease of expansion and possible relocation, and of making economical use of available space, all at a reasonable cost, it is not surprising that few map collections are satisfactorily housed.

Before discussing the principal methods of storing maps, we should discard two which are not suitable for a permanent collection: the cross-folding of maps to fit letter- or legal-size vertical filing cabinets, which results in deterioration of the paper at the corners of the folds, and storage in tubes or in "roll-files," which wastes space and makes the maps difficult to use because of the curling of the paper.

There are three acceptable types of equipment for map storage, each of which fulfills most of the requirements already mentioned. These are the shallow, horizontal drawer (three to five in a case, of wood or steel); vertical filing equipment of two types, both of steel; and the tied portfolio filed on closely-spaced wood or steel shelving.

Most map librarians now agree that the first of these offers the best combination of protection, accessibility, and ease of expansion. There is also nearly unanimous agreement that cases should be of steel for durability; that drawers should be no more than two inches deep because of the difficulty of pulling and refiling sheets near the bottoms of piles of greater depth without damaging them; that drawers should be mounted on rollers; that they should have a "lock-out" feature to hold them in the open position while contents are being handled; and that they should be equipped with fabric "dust covers" that hook at the front of the drawer, not only for protection from dust but to prevent maps from catching or rubbing on the underside of the drawer above or being pushed out at the back, and to minimize sliding by exerting some downward pressure.

Drawers with metal "hoods" at the back and hinged "compressors" at the front will control sliding and prevent the escape of sheets at the back, but do not offer adequate protection from dust, and cannot be as fully loaded, especially with small-sized maps, as those with fabric covers. In any collection, some drawers may be temporarily overloaded, and the smooth, treated fabric stretched tightly over the maps will compress them and at the same time withstand the friction that would otherwise damage the map or jacket at the top.

Five-drawer units handling sheet sizes from 24 x 18 to 74 x 46 inches are available from several manufacturers. All of them produce cabinets in the middle of this size range, suitable for the general map collection.

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Some of these companies produce horizontal-drawer cabinets of other types, such as ten-drawer units with three-quarter-inch drawer depth and special "lifters" in each drawer, useful for large thin drawings or tracings of uniform size; three- or four-drawer models with drawer depths up to nearly four inches; and wooden cabinets in several styles and sizes.

The fact that horizontal cases can be stacked as high as space shortage may dictate and floor strength permits has undoubtedly contributed much to their popularity. Starting at the two-case level, the collection can grow for many years on the original floor space.

As long as the tiers (or some of them) remain at that level, there is also the advantage, not shared by the other two storage methods, of having work space at the convenient height of about three feet. Even with cases stacked three high, it is possible to use the tops for some kinds of processing or reference work. Four cases rise to just above eye level for a man of average height, and the top can be used for storing globes, reference books, very large atlases, etc.

As Ristow³ says, a drawer with inside measurements of 43 x 32 inches seems most practical for a general map collection. It will contain, without folding, most of the topographic and other map series published in this country and abroad, while the next larger size, 50 x 38 inches, will not permit double stacking of a sufficient number of these series to make it worth the additional cost and floor space involved. However, larger cases will more efficiently house sheets of large size (e.g., nautical charts) which may constitute a separate collection.

Some confusion seems to exist regarding the capacity of drawers of this type, probably resulting from misinterpretation of manufacturers' statements. For example, Hamilton Manufacturing Company recommends 100 sheets per drawer for active files, but this refers to full-size drawings, tracings or blueprints, for which this kind of equipment was originally designed, and which are usually on thin or fragile materials. As many as 300 map sheets can be placed in one stack in a drawer of 2 inches depth. Even if the sheets are laminated, and are filed in a half dozen heavy folders for ease of handling, the drawer will still hold 250 or more sheets.

Collison objects to horizontal cabinets on the ground that they have ". . . as much space devoted to partitions as to actual map space."⁴ This was true of the older type of cabinet with drop-front drawers and a partition above each drawer. The modern five-drawer case, with a

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fabric dust cover but without the partitions or drop-fronts, has ten inches of filing space in a 15¾ inches vertical measurement.

Of the two types of vertical filing equipment, the one more frequently used for map collections is the Art Metal "Planfile," with a hinged top, in which strong pockets are suspended, sliding on rails at the sides. Each pocket can contain several folders, which may be of different depths. The contents are compressed by sets of springs between the pockets. These cabinets measure 31 inches from front to back and vary from 43 to 63 inches in width and 35 to 45 inches in height. Their capacity varies from 3,000 sheets for active use to 6,000 sheets for dead storage.

In the second type, the maps are suspended from long metal clamps or binders in groups of up to 100 (as in those made by Hamilton or by the Plan Hold Corporation) or individually by plastic clips fastened by pressure adhesive to the map itself (as in the Globe-Wernicke "Cello-Clip" file.) In the Hamilton and Plan Hold types, the rack supporting the binders slides or swings forward to allow easier access to the groups in the back. This type of cabinet varies from 52 inches to 72 inches in height, with capacity running from 1,200 to 2,600 sheets of large size (up to 36 x 65 inches) on floor areas of from seven to ten square feet.

The Art Metal Planfile offers maximum protection from dust, water, and fire and requires somewhat less floor space than do ten to twelve horizontal drawers for the housing and use of a comparable number of maps. The suspension type of cabinet will accept much larger sheets, without folding, than any of the others. None of the vertical filing cabinets require any stooping or ladder climbing, as do horizontal drawer cabinets. But they are much more expensive than the latter for equivalent capacity, they cannot be stacked one on the other, and their tops cannot be used as work space. (In practice, it has been found that the hinged tops are very often loaded with work or debris, putting the cabinets out of commission at crucial moments.)

Collison prefers a vertical filing method because ". . . it is easier to extract and replace a map from a vertical than from a horizontal position. . . ." ⁴ This is true of the suspension type of cabinet so long as it is only loosely occupied, and it is true of the Art Metal type except for well-loaded folders toward the back. On this point, LeGear says that ". . . to slide out the back dozen folders . . . is backbreaking work, especially for a short person." ⁵ Men of average stature and strength, including this writer, have found this to be true. Collison also says

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that “. . . maps of different sizes can be filed together vertically without any danger of the smaller maps being overlooked.”⁴ This is a definite advantage over horizontal filing, but it is offset in the Art Metal cabinet, by the danger of some sheets sliding downward and being crumpled at the bottom unless they are strengthened by mounting or lamination. It may even become impossible to remove the folder because of the resulting bulge.

One of the vertical filing methods may be highly satisfactory for engineering or architectural drawings, which are usually larger on the average, and show less variation in size, than is the case with maps; they are also often on thinner or weaker materials, are often used in groups of associated sheets which will not be added to and can be clamped together without inconvenience, and are frequently of greater value, irreplaceable, and therefore deserving of extra expense for protection from fire and water. But for active and growing map collections, stackable drawer units, with their much greater potential capacity in relation to floor area, are undoubtedly the wiser choice.

The use of portfolios or boxes on closely-spaced shelving is preferred by some librarians, particularly in Europe. Jong⁶ describes the use of flip-top buckram boxes on wooden shelves constructed to fit them, so that the boxes slide into the shelving like drawers. This system may be relatively inexpensive if “free” carpentry is available, as may be the case in many university or corporation libraries. But wooden shelving may not be sufficiently durable and may prove to be more expensive than steel drawers in the long run.

Foncin⁷ says that horizontal drawers were considered when the Département des Cartes et Plans of the Bibliothèque Nationale moved to new quarters in 1954, but were rejected in favor of the current system of filing in portfolios. Steel roller shelving has, however, replaced the former wooden shelves, and the cost, including durable portfolios, may be nearly as high as for steel drawers. The former are, moreover, more difficult to disassemble should it become necessary to move them.

The portfolio provides excellent protection from dust, the map's most persistent enemy. If the portfolios are full, or if some filler material is added, they can also prevent sliding and the consequent tearing or curling of the edges. But unless the entire portfolio is carried to the reading table, some space must be provided where it can be opened and the desired sheets extracted. Added to this is the inconvenience of retying tapes, which increases the labor of searching, pulling, and re-filing.

Cartographic forms other than flat sheets deserve some mention, because they represent a much greater investment per unit than maps in the general collection, and because they require special treatment. Wall maps kept on rods are usually an important part of school and university collections. Several librarians⁸⁻¹³ have discussed their solutions to the problem of housing them, always with equipment designed and built on the premises. Most often the map is hung from a hook by a screw eye in one end of the center rod, the hooks being mounted either on the ceiling or in a tall cabinet.

Plastic relief maps are becoming more numerous and, although still expensive, may take the place of the paper wall map for decorative and instructional purposes. Since they cannot be piled one on the other without permanent damage, the most practical answer to the problem of protection and accessibility appears to be the placing of a metal grommet in the center of one of the short sides and suspending them from fixed hooks or from wires, using S-hooks. Since their surfaces are washable, they need no further protection.

Atlases, being books, are not looked upon with the same distaste as some librarians have felt toward maps. The standard double-faced, ten-inch book shelving will accommodate most of them, either standing or lying flat, depending upon their size and construction.

Where large atlases are frequently used, they are best protected by keeping them on roller shelving to minimize wear on the covers. Art Metal, Inc. offers counter-height steel cabinets in 35- and 22-inch widths, 28 inches deep. The adjustable shelves are steel frameworks in which a number of rollers are mounted, rising slightly above the level of the surrounding framework. Similar cabinets are made by the General Fireproofing Co., 413 Dennick Avenue, Youngstown 1, Ohio.

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